

S/N 09/935,580

Response to Office Action Dated 04/26/2005

In the Claims

Claims 1—22 and 24 remain in their original form.

Claim 23 is currently amended.

1. (original) A method of printing a test pattern, having a plurality of elements, for determining an operational parameter of a printing device, the method comprising the steps of:

determining the size of a print medium presently loaded in the printing device;

adjusting, in accordance with the determined size of the print medium, the relative position on the print medium of a plurality of elements of the test pattern to be printed; and

printing the test pattern on the print medium.

2. (original) A method as claimed in claim 1, further comprising:

arranging the elements of the test pattern during said adjusting step in a layout which substantially minimizes the amount of print medium that is expended to print the whole test pattern.

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1 3. (original) A method as claimed in claim 1, further comprising:
2 determining the width of the print medium during the size determining step;
3 and
4 arranging to be printed as many test pattern elements as will fit across the
5 determined width of the print medium during the adjusting step.
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7 4. (original) A method as claimed in claim 3, further comprising:
8 arranging to be printed subsequent to one or more media advance
9 movements by the printing device any remaining test pattern elements once the
10 maximum number of test pattern elements that can be printed across the width of
11 the print medium is reached.
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13 5. (original) A method as claimed in claim 1, further comprising:
14 determining both the width and the height of the print medium during the
15 size determining step.
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18 6. (original) A method as claimed in claim 1, further comprising:
19 holding the test pattern in a memory of the printing device; and
20 accessing said memory prior to the printing step.
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1 7. (original) A method as claimed in claim 1, further comprising:
2 determining the size of the print medium during the size determining step,
3 wherein said size of the print medium is determined automatically by the printing
4 device.

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6 8. (original) A method as claimed in claim 1, further comprising:
7 determining the size of the print medium during the size determining step,
8 wherein the size of the print medium is determined by a user of the printing device
9 and is input by the user to the printing device.
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12 9. (original) A method as claimed in claim 1, comprising the further
13 step of automatically measuring the printed test pattern to determine an
14 operational parameter of the printing device.
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17 10. (original) A method as claimed in claim 9, wherein the automatic
18 measurement of the test pattern further comprises:

19 optically scanning the elements of the printed test pattern.
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21 11. (original) A method as claimed in claim 10, further comprising:
22 choosing the relative positioning of the elements of the test pattern during
23 the adjusting step, to thereby substantially minimize the number of scanning
24 movements required to optically scan the whole of the test pattern.
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2 12. (original) A method as claimed in claim 1, comprising a further step
3 in which the user of the printing device determines from the printed test pattern an
4 operational parameter of the printing device and enters or adjusts the parameter via
5 an interface with the printing device.
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7 13. (original) A method as claimed in claim 1, wherein the test pattern is
8 a color calibration pattern and each element of the test pattern relates to the
9 calibration of one of the primary colors of the printing device.
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12 14. (original) A method as claimed in claim 13, wherein each element of
13 the test pattern comprises sub-elements, the method further comprising:
14 adjusting the relative positions of the sub-elements during the print medium
15 adjusting step in accordance with the determined size of the print medium, to
16 substantially minimize the amount of print medium that is expended to print the
17 whole test pattern.
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15. (original) A method as claimed in claim 1, wherein at least one of the elements of the test pattern comprises a plurality of sub-elements, the method further comprising:

adjusting the number of sub-elements of said at least one element to be printed in accordance with the determined size of the print medium, but not reducing below a minimum number of sub-elements necessary to determine the operational parameter of the printing device, during the print medium adjusting step.

16. (original) A method as claimed in claim 1, wherein at least one of the elements of the test pattern comprises a plurality of sub-elements, the method further comprising:

adjusting the size of at least one sub-element of said at least one element to be printed in accordance with the determined size of the print medium, but not reducing below a minimum size of sub-element necessary to determine the operational parameter of the printing device, during the print medium adjusting step.

17. (original) A method as claimed in claim 1, wherein the test pattern comprises an image.

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18. (original) A method as claimed in claim 1, comprising the initial step of, prior to determining the print medium size, unloading from the printing device, a roll of print medium and loading a sheet of print medium into the printing device.

19. (original) A method as claimed in claim 1, further comprising:
arranging the elements of the test pattern in a layout which substantially maximizes the accuracy with which the operational parameter of the printer may be determined, during the adjusting step.

20. (original) A method as claimed in claim 1, wherein at least one of the elements of the test pattern comprises a plurality of sub-elements, the method further comprising:

adjusting either the size of at least one sub-element or the number of sub-elements to be printed or both the size and the number of sub-elements in accordance with the determined size of the print medium, to substantially maximize the accuracy with which the operational parameter of the printer may be determined, during the adjusting step.

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1 21. (original) A method of setting an operational parameter of a printing
2 device comprising the steps of:

3 determining the size of a print medium presently loaded in the printing
4 device;

5 adjusting, in accordance with the determined size of the print medium, the
6 relative position on the print medium of a plurality of elements of a test pattern to
7 be printed;

8 printing the test pattern on the print medium;

9 determining from the printed test pattern a value for the operation
10 parameter of the printing device; and
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12 setting the operational parameter of the printer to said determined value.
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14 22. (original) A method as claimed in claim 21, further comprising:

15 arranging the elements of the test pattern in a layout which substantially
16 minimizes the amount of print medium that is expended to print the whole test
17 pattern, during the adjusting step.
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1 23. (currently amended) A printing apparatus having a settable
2 operational parameter, the apparatus comprising:

3 a print engine capable of receiving instructions to print data;

4 a media advancing mechanism into which print media is loadable;

5 a media measurer for measuring the size of loaded print media;

6 a memory for storing a printable test pattern having a plurality of separable
7 elements; and

8 a processor having an input for receiving size data regarding the presently
9 loaded print medium from the media measurer and an output to the print engine
10 for passing instructions to print a test pattern,

11 wherein the processor, in use, ~~formats the plurality of separable elements of~~
12 ~~the test pattern relative to each other so that the whole test pattern when printed~~
13 ~~expends a substantially minimum amount of print media~~ adjusts, in accordance
14 with the determined size of the print medium, the relative position on the print
15 medium of a plurality of elements of the test pattern to be printed.
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1 24. (original) A printing apparatus as claimed in claim 23, further
2 comprising:

3 a scanning carriage having a plurality of color ejection devices and an
4 optical sensor for measuring test patterns, wherein, in use, following the printing
5 of the test pattern by the color ejection devices, the test pattern is scanned by the
6 optical sensor and the processor calculates from the scanned data a new or
7 adjusted value for a operational parameter of the printing apparatus.
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